	SEQUENCE LISTING	Date of Deposit: 1-21-00
5	<110> Gure, Ali Stockert, Elisabeth Scanlan, Matthew J. Jager, Dirk Old, Lloyd J. Chen, Yao-Tseng	
10	<120> SMALL CELL LUNG CANCER ASSOCIATED ANTIGENS AND USES THEREOF	
	<130> L0461/7073	
15	<160> 22	
1/1/1	<170> FastSEQ for Windows Version 3.0	/
W L	<210> 1 /	
1/ 1/20)	<211> 29	
1 (120)		
リスノー	<212> DNA /	
	<213> Homo sapiens	
	<400> 1	
25	catgaatatg aacatgggta tgaacatgg	29
	<210> 2	
	<211> 23	
	<212> DNA	
30	<213> Homo sapiens	
	<400> 2	
	tcgcagccct caaactcaca ctg	23
	/ / / / / / / / / / / / / / / / / / /	2.5
35	<210> 3	
	<211> 1085	
	<212> DNA	
	<213> Homo sapiens /	
	/	
40	<400> 3	
	cacagogoco goatgtacaa catgatggag acggagotga agoogooggg co	cgcagcaa 60
	actteggggg geggeggegg caactecace geggeggegg ceggeggeaa ce	
	ageceggace gegteaageg geeatgaat geetteatgg tgtggteeeg eg	
	cgcaagatgg cccaggagaa ccccaagatg cacaactcgg agatcagcaa gc	geetggge 240
45	gccgagtgga aacttttgtc/ggagacggag aagcggccgt tcatcgacga gg	ctaagcgg 300
	ctgcgagcgc tgcacatgaa ggagcacccg gattataaat accggccccg gc	
	aagacgetea tgaagaagga taagtacaeg etgeeeggeg ggetgetgge ee	
	aatagcatgg cgagcggggt cggggtgggc gccggcctgg gcgcgggcgt ga	
	atggacagtt acgcggacat gaacggctgg agcaacggca gctacagcat ga	tgcaggac 540
50	cagetggget accegeagea ceegggeete aatgegeaeg gegeagegea ga	tgcagccc 600
50	atgcaccgct acgacgtgag cgccctgcag tacaactcca tgaccagctc gc	agacctac 660
	atgaacgget cgéccaceta cagcatgtec tactegeage agggeacece tg	
	cttggctcca tgggttcggt ggtcaagtcc gaggccagct ccagcccccc tg	
	tettectece ,actecaggge gecetgecag geoggggace teegggacat ga	
55	tatctccccq qcqccqaqqt qccqqaaccc gccqccccca gcaqacttca ca	
33		
	cactaccaga geggeeeggt geeeggeaeg gecattaaeg geacaetgee ee	
	atgtgagggc cggacagcga actggagggg ggagaaattt tcaaagaaaa ac	
	tgggagggt gcaaaagagg agagtaagaa acagcatgga gaaaacccgg ta	
	aaaaa	1085
60	aaaaa	1005
60		
	<210> 4	
	<211> 4091	
	<212> DNA	
	TELES ONE	

٧__

<213> Homo sapiens

400

24

0

<400> 4 coggoogtot atgotocagg coctotocto goggtgoogg tgaaccegoo agcogcoceg 5 atgtacagca tgatgatgga gaccgacctg cactcgcccg gcggcgccca qqcccccacq aacctctcgg gccccgccgg ggcgggcggc ggcgggggg gaggcggggg cggcggggc 180 ggcgggggcg ccaaggccaa ccaggaccgg gtcaaacggc ccatgaacgc cttcatggtg 240 tggtcccgcg ggcagcggcg caagatggcc caggagaacc ccaagatgca caactcggag 300 atcagcaagc gcctgggggc cgagtggaag gtcatgtccg aggccgagaa gcggccgttc 360 10 420 atcgacgagg ccaagcggct gcgcgcgctg cacatgaagg agcacccgga ttacaagtag cggccgcgcc gcaagaccaa gacgctgctc aagaaggaca agtactcgct ggccggcgg 480 540 ctcctggcgg ccggcgcgg tggcggcggc gcggctgtgg ccatgggcgt gggcgt/ggc gtgggcgcgg cgcccgtggg ccagcgcetg gagagcccag gcggcgcggc gggcgcgcg 600 tacgcgcacg tcaacggctg ggccaacggc gcctaccccg gctcggtggc ggcgcgcg gccgccqcqq ccatgatgca ggaggcgcag ctggcctacg ggcagcaccc cgcgcgggc 720 ggogogoaco ogcacogoac cocogogoac cogoacocgo accacocgoa eggoacocg cacaacocgo agocoatgoa cogotacgac atgggogogo tgcagtacag cocoateteo 780 840 aactcgcagg gctacatgag cgcgtcgccc tcgggctacg gcggcctcgc ctacggcgcc 900 geggeegeeg eegeegeege geaceagaac teggeegtgg eggeggeggeg 960 1020 gccgcgtcgt cgggcgccct gggcgcgctg ggctctctgg tgaag#cgga gcccagcggc ageocycocy coccagogoa ctogogygog cogtgococy gygacotycy cyagatgato 1080 ageatgtact tgcccgccgg cgaggggggc gacccggcgg cggcagcagc ggccgcggcg 1140 cagagoogge tgcactoget googcagoac taccagggog cgggogoggg cgtgaacggo 1200 acggtgcccc tgacgcacat ctagcgcctt cgggacgccg /gggactctgc ggcggcgacc 1260 cacgageteg eggeeegee eeggeteeeg eccegeeegg gegeggegtg gettttgtat 1320 cagacgttcc cacattettg tcaaaaggaa aatactggag acgaacgccg ggtgacgcgt qtececaet cacetteece qqaqaceetq qeqaeeqeeq qqeqetqaca ccaqaettqq tttagactga acttcggtgt tttcttgaga cttttgtaca gtatttatca cctacggagg aagcggaagc gttttctttg ctcgagggga caaaaagtc aaaacgaggc gagaggcgaa 1560 gcccaetttt gtataccggc cggcgcgctc actttcctcc gcgttgcttc cggacggcgc 1620 egaccqccqq agcccaagtg acqcqqagct catcqcattt gttataaatg tagtaaggca 1680 1740 ggtccaagca cttacaagtt ttttgtagtt gttaccgctc ttttgggttg gtttgttaat ttatacaaag agattaccac caccacccc tccttcagac ggcggagtta tattctgggt 1800 tttgtaaaac tttatgtatc tgagcattxc cattttttt tttgggtttt gtattatttc 1860 ttgtaaatgc attgtgaaaa attttat tt cggcgttgca atgcggggag gagaagtcag 1920 attatgtaca tagttttcta aaaagocttt cttctaaaaa cgaaaaaaaga cccccaccca 1980 aaatgtttcg agtcaacaaa tttaagagac agagcccatt ttctccataa atttgtaaca 2040 tgcctatttt tatgtgcatg ttt atgagt tcaaaatgca atgagggaaa tctgacaggg 2100 aaattatotg tatgaactaa aagtaaggga accoggggaa tgggaggaca ggattttca aggaaccttt ttcaatgaaa gagaaggaag ttaaaaccta taggttattt tgtagagctg agtgttaata cgggccgaga/aataaaagta tottotgoto cggctgttto actgcggacg 2340 gctggggctg ctgcgcgtt/ ccttgctgca acngggcgcc ttccacctgg ctgggggtct gcgccacagt ttggtccaga ngwgggagga ggaagggaag accccagtgg tgggaccctg 2400 gaccaggcca tggatgaagg acaaagacca gggcaggtca cgggtttccc aattccccag caattaagat ttcgagcaga atttatctaa atgtgtttca aggaaacaca atcgctgaac caaaacgtac tgcagccgan cocctccgt ccatcctctg cccctcccc tggcttcttt 2580 ctcttgggaa aacgggcaaa ataattgtgc tggattctca cacacacaga aatatcgacc 2640 2700 atcaccctcc cccgcgtgaa ctgggatgca agttgctaac cgatgtgaac gcaaaatgcc ttgttcatta tcctgacga gatcttgagg ttgtttgatg ctttaaattt tttaattata 2760 ttattttcta/ggtgtttatt ggtacattgc agttttttt ttgaaattta aaaatttctg 50 2820 taaaactttg tetteaagta atetgacage attaaatatt geatttaaaa attataetgt agcaaatada tttaaaaatt aatcacaacg ttaagatgaa attatatttt tggaaaaaaa aaacact/ga agcccagatg gaaatacgtt tatttcagca gccttaggtt tcccctcgct ttetcaacac cetteettgt cetggagtat ggactgteeg tecaaaagtg ageetatget 55 ataagettaa tgagaaccga attcagcctg cattcgagaa tagctttaag tataatgctg 3120 3180 atct/acaat tgacgtgtaa tttgggaagt cattttgata attttgctta aaccactcat tcg/taaagt gattacaaaa aagttcaaga atgatgtcca ctgctttcta acaagataat 3240 agacccccc cetetttet tttetttat ttttatttet tttagetatt tgateettte 3300 tygaagcagtt gtttctggaa gagtctgtgc gcccatggat ggctgagcac cactacgact 3360 3420 Lagtccggga taagggcctc cccagtcctc tccgggagat gatttgggaa attttataat gcttqttctq ttaactcacc qqqaccttqa qggtccaatg ggaccttgag ggttttctct 3480 3540 gaaatataca aacttaaagg actctctctg aggttctttg actgacgtcc actctcagtc

tggcccctgt gctcccctgt gtgtaccctg gagtttctgt gtccaattgt tggcatctag

```
gtcttggctc aagattagga tgtgggcccc actttagagg cacagactat gaaaagctga
                                                                            3660
      gttagtgcgc ccgggacgcc aggcaagcag cttttacagt ttggcatctt attgcaggtg
                                                                            372/0
      cttcgtgcac agtcagctga aatagccaat gccaggtgct ccaaccacct tatttccttg
                                                                            37/80
     ttttgttgat tagaacaaca cagaaaaaag caaatataaa tttttaatga ctccatttaa
                                                                            3840
5
      aaatatcaca gggtgggggc aaggaaatta gctgagattc atctcaggat tgagattcta
                                                                            3900
      teccecette ecegeceeca geagtgtege tecaatteaa attagtggag aaaagattae
                                                                            3960
      agtaggeeet gageegactg tgaatteggt gettggeeaa ggtaacacte ategtattea
                                                                            4020
      cggagraaat actatatgat gatagttatt atattatatg acgacttcat teacttecca
                                                                            4080
      aatcacaggg t
                                                                            4091
10
            <210> 5
            <211> 1602
            <212> DNA
            <213> Homo sapiens
           <400> 5
      atgctcctgg acgcgggtcc gcagttcccg gccatcgggg tgggcagct/ccgcgccac
                                                                              60
      catcaccact ccgccgcggc ggcggcggcg gctgccgccg agatgcagga ccgtgaactg
                                                                             120
      agectggegg eggegeagaa eggettegtt gatteegeeg eegegeacat gggageette
                                                                             180
      aagetcaaec egggegegea egagetgtee eegggeeaga geteggegtt eaegtegeag
                                                                             240
      ggccceggcg cetaccecgg ctccgctgcg gctgccgctg cgggcgcagc gctcgggccc
                                                                             300
      cacgccgcgc acgttggctc ctactctggg ccgcccttca acxccacccg ggacttcctg
                                                                            360
     ttccgcagcg cgcggcttcc ggggacttcg gcgccgggcg gcgggcagca cgggctgttc
                                                                            420
      gggccgggcg cgggcggcct gcaccacgcg cactcggacg /cgcagggcca cctcctcttc
                                                                             480
     ccgggcctgc cagagcagca cgggccgcac ggctcgcag atgtgctcaa cgggcagatg
                                                                            540
     cgcctcgggc tgcccggcga ggtgttcggg cgctcggagc aataccgcca ggtggccagc
                                                                             600
     ccgcggaccg accetacte ggcggcgcaa ctccacaacc agtacggccc catgaatatg
                                                                             660
     aacatgggta tgaacatggc agcagccgcg gcccagcacc accaccacca ccaccaccac
                                                                            720
     cccggtgcct ttttccgcta tatgcggcag cagtgcatca agcaggagct aatctgcaag
                                                                            780
     tggatcgacc ccgagcaact gagcaatccc aagaagact gcaacaaaac tttcagcacc
                                                                            840
     atgcacgage tggtgacaca cgtctcggtg gagcacgtcg gcggcccgga gcagagcaac
                                                                            900
     cacgtctgct tctgggagga gtgtccgcgc gagggcaagc ccttcaaggc caaatacaaa
                                                                            960
     ctggtcaacc acatecgegt gcacacagge/gagaaaccet teceetgeec etteeeggge
     tgtggcaaag tcttcgcgcg ctccgagaac ctcaagatcc acaaaaggac ccacacaggg
                                                                            1080
     gagaaqccgt tccaqtqtga gtttgaggqc tgcgaccggc gcttcqccaa cagcaqcgac
                                                                            1140
     aggaagaagc acatgcacgt ccacacetcc gataagccct atctctgcaa gatgtgcgac
                                                                            1200
                                                                            1260
     aagteetaca egcaceeeag etege/gegg aageacatga aggteeatga gteeteeeeg
     cagggttetg aatceteece ggeogeeage teeggetatg agtegteeae geeceegggg
     ctggtgtccc ccagcgccga gcgccagagc agctccaacc tgtccccagc ggcggcggca
                                                                            1380
     gcggcggcgg cggctgcggc gggcggcc gcggtgtccg cggtgcaccg gggcggaggc
                                                                            1440
     tegggeagtg geggeggg aggegetea ggeggeggea geggeagtgg eggggegge
     ggcgggggg gcggggggg cggcggcagc tctggcgggg gcagcgggac agccgggggt
                                                                            1560
      cacagoggoo totootooga ottoaatgaa tggtacgtgt ga
                                                                            1602
45
            <210> 6
            <211> 1322
            <212> DNA
            <213> Homo sapiens
50
            <400>/6
                                                                              60
      ggaattccgg/gcgcggttgt gagtagtacc gggagtgggg tgatcccggg ctaggggagc
      gcqqcqccc atcqqqctta gtcqqaqctc cqaaqqqagt qactaggaca cccqqgtqqq
                                                                             120
                                                                             180
      ctactttt/ct tccggtgctt ttgctttttt tttcctttgg gctcgggctg agtgtcgccc
                                                                             240
      actgagodaa gatteceteg taaaacecag agegaecete cegteaattg ttgggetegg
55
                                                                             300
      gagtqtcqcq qtqccccgag cqcgccqqqc qcqqaggcaa agggagcgga gccggccgcq
                                                                             360
      gacggggccc ggagcttgcc tgcctccctc gctcgcccca gcgggttcgc tcgcgtagag
                                                                             420
      cqcadqqcqc qcqcqatqaa qqcqqtqaqc ccgqtqcgcc cctcgggccg caaggcgccg
                                                                             480
      tcg/gctgcg gcggcggga gctggcgctg cgctgcctgg ccgagcacgg ccacagcctg
                                                                             540
      gg/tggctccg cagccgcggc ggcggcggcg gcggcagcgc gctgtaaggc ggccgaggcg
                                                                             600
60
      geggeegacg ageoggeget gtgcetgeag tgcgatatga acgaetgeta tageogcetg
      Éggaggetgg tgeceaceat ecegeceaae aagaaagtea geaaagtgga gateetgeag
                                                                             660
                                                                             720
      cacgitateg actacatect ggaeetgeag etggegetgg agaegeacce ggeeetgetg
                                                                             780
```

aggeagecae caeegeeege geegeeaeae caeeeggeeg ggaeetgtee ageegeege

CARCOLLOI

200

PI.

Ċ

```
ccgcggaccc cgctcactgc gctcaacacc gacccggccg gcgcggtgaa caagcagggc
     gacagcattc tgtgccgctg agccgcgctg tccaggtgtg cggccgcctg agcccgagcc
                                                                           900
     aggagcacta gagagggagg gggaagagca gaagttagag aaaaaaaqcc accggaqqaa
     aggaaaaaac atcggccaac ctagaaacgt tttcattcgt cattccaaga gagagagag
                                                                          1/120
 5
     aaagaaaaat acaactttca ttctttcttt gcacgttcat aaacattcta catacgtatt
                                                                           1080
     ctcttttgtc tcttcattta taactgctgt gaattgtaca tttctgtgtt ttttggaggt
                                                                          1140
     gcagttaaac ttttaagctt aagtgtgaca ggactgataa atagaagatc aagagtagat
                                                                          1200
     ccgactttag aagcctactt tgtgaccaag gagctcaatt tttgttttga agctttactay
                                                                          1260
     atctaccaga gcattgtaga tattttttt ttacatctat tgtttaaaat agccggaayt
                                                                          1320
10
                                                                          1322
           <210> 7
           <211> 2389
           <212> DNA
15
           <213> Homo sapiens
           <400> 7
     cggctcagcg ggggccgagg ccatgttccc ggtgtttcct tgcacgotgc tggcccccc
                                                                            60
     cttccccgtg ctgggcctgg actcccgggg ggtgggcggc ctcatgaact ccttcccqcc
                                                                           120
     acctcagggt cacgcccaga accecctgea ggtcggggct gagctccagt cccgcttctt
                                                                           180
     tgcctcccag ggctgcgccc agagtccatt ccaggccgcg ccgccccc cgcccacgcc
                                                                           240
     ccaggccccg gcggccgagc ccctccaggt ggacttgctc c/ggtgctcg ccgccgccca
                                                                           300
     ggagtccgcc gcggctgctg cggccgctgc cgccgctgct ccggccgtcg ctgccgccc ccggcccct gccgccgcc ctacggtgga cacagcggcc ctgaagcagc ctccqqcqcc
                                                                           360
                                                                           420
25
     ccctccgcca cccccgccag tgtcggcgcc cgcggccgag gccgcgccc ccgcctccgc
                                                                           480
     egecactate geogeggegg eggecacege egtegtagee ceaacetega eggtegeegt
                                                                           540
     ggccccggtc gcgtctgcct tggagaagaa gacaaagagc aaggggccct acatctgcgc
                                                                           600
     tctgtgcgcc aaggagttca agaacggcta caatotccgg aggcacgaag ccatccacac
                                                                           660
     gggagccaag gccggccggg tcccctcggg tgctatgaag atgccgacca tggtgcccct
30
     gagectectg agegtgeece agetgagegg ageggggg ggagggggag aggegggtge
                                                                           780
     eggeggegge getgeegeag tggeegeegg tggegtggtg accaegaeeg eeteggggaa
                                                                           840
     gcgcatccgg aagaaccatg cctgcgagat stgtggcaag gccttccgcg acgtctacca
                                                                           900
     cctgaaccga cacaagctgt cgcactcgga/cgagaagccc taccagtgcc cggtgtgcca
                                                                           960
     gcagcgcttc aagcgcaagg accgcatgag ctaccacgtg cgctcacatg acggcgctgt
     gcacaagece tacaactget eccactgtog caagagette teceggeegg atcaceteaa
                                                                          1080
     cagtcacgtc agacaagtgc actcaagaga acggcccttc aaatgtgaga aatgtgaggc
                                                                          1140
     agctttcgcc acgaaggatc ggctggggc gcacacagta cgacacgagg agaaagtqcc
                                                                          1200
     atgtcacgtg tgtggcaaga tgctgagctc ggcttatatt tcggaccaca tgaaggtgca
                                                                          1260
     cagccagggt cctcaccatg tct/tgagct ctgcaacaaa ggtactggtg aggtttgtcc
                                                                          1320
     aatggcggcg gcagcggcag cggcggcagc ggcagcagcg gcagcagtag cagccctcc
                                                                          1380
     cacagetgtg ggetecetet cogggggggga gggggtgeet gtgagetete agecaettee
                                                                          1440
     ctcccaaccc tggtgagctc caagttggtt gcgggggaga ggggagaatg gagtagagtc
     1560
     aggagcctcc agaaggaaag gaggaagaaa tgttttctta ggggaattcg ctaggtttta
     acquittqct tctcctqotc ctcttctatc agacctgacc ccacacaaac ctgtccctc
                                                                          1680
     ggttgtgttg aagtccoctg gacaqtggqc agggqtggca gaggacacga qcaqccactg
     cccgtacccc ctctcgtctc tgtaagccca tgccctgtct tcccagggac ttgtgagcct
     cttccctcga cggt ctctt ctctccttcc agtcctctcc ccctgctgtc tgcagcccct
     ccccggggag ttggtttt cttttccttt ttttttttt ttccaggggg agggaggaga
                                                                          1920
50
     qqaaqqaqqq qqatcaqaqc tqtcccaaaq aqqqaaaqcq qtqaqqtttq aqqaqqqca
                                                                          1980
     gaagcagggc cogcaaaggt tgtaccttca taaggtggta tcggggggtt ggggtcaggc
                                                                          2040
     cctgaacatc &tcctacttg agaatctgtc aggggaaaaa gtcaagggga gcaggaggaa
                                                                          2100
     gagccaggag/ggccagaggc agagaagaga tggagtctta ggggccaggg tgagccaggg
                                                                          2160
                                                                          2220
     55
     ttccaccoca getccagece tggtettgte ttttcatece tettececae gacagaagaa
                                                                          2280
                                                                          2340
     gttgtggccc tggcatgtca tcgtgttcct gtgtcccctg catgtacccc accctccacc
                                                                          2389
     ccttcotttt gcgcggaccc cattacaata aattttaaat aaaatcctg
           <210> 8
           <211> 1860
           <212> DNA
           <213> Homo sapiens
```

Ç

10

n.

ļ

```
<400> 8
     gggacgtgag ccgctgcgcc caccgggcta gacccggcgc catcatgctg cttctgccaa
     gegeegegga eggeegggge acegecatea eccaegetet gaeetetgee tetacaetet
                                                                             120
     gtcaagttga acctgtggga agatggtttg aagcttttgt taagaggaga aacagaaatg
                                                                             180
5
     cttctgcctc ttttcaggaa ctggaggata agaaagagtt atccgaggaa tcagaagatg
                                                                             240
     aagaattgca gttggaagag tttcccatgc tgaaaacact tgatcccaaa gactggaaga
                                                                             300
     accaagatca ttatgcagtt cttggacttg gccatgtgag atacaaggct acacagagac
                                                                             360
     agatcaaagc agctcataaa gcaatggttt taaaacatca cccagacaaa cggaaagcag
                                                                             420
     ctggtgaacc aataaaagaa ggagataatg actacttcac ttgcataact aaagcttatg
                                                                             480
10
     aaatgttatc tgatccagtg aaaagacgag catttaacag tgtagatcct acttttgata
                                                                             540
     actcagttcc ttctaaaagt gaagcaaagg ataatttctt cgaagtgttt accccagtgt
                                                                             600
     ttgaaaggaa ttccagatgg tcaaataaaa aaaatgttcc taaacttggt gatatgaatt
                                                                             660
     catcatttga agatgtagat atattttatt ctttctggta taattttgat tct/ggagag
                                                                             720
     aattttetta titagatgaa gaagaaaaag aaaaagcaga atgtcgtgat gagaggagat
                                                                             780
     ggattgaaaa gcagaacgga gcaacaagga cacaaagaaa aaaagaagaa ttgaacagaa taagaacatt agttgacaat gcatacagct gtgatccaag gataaaaaaa ttcaaggaag
                                                                             840
                                                                             900
     aagaaaaagc caagaaagaa gcagaaaaga aagcaaaagc agaagctaaa cggaaggagc
                                                                             960
     aagaagctaa agaaaaacaa agacaagctg aattagaagc tgctcggtta gctaaggaga
     aagaagagga ggaagtcaga cagcaagcat tgctggcaaa gaaggaaaaa gatatccaga
                                                                            1080
                                                                            1140
     aaaaagccat taagaaggaa aggcaaaaac ttcgaaactc atgcagata gaagaaataa
     atgagcaaat cagaaaagag aaagaggaag ctgaggctcg tal/gcgacaa gcatctaaga
     acacagagaa atcaactggt ggaggtggaa atggaagtaa adattggtca gaagatgatc
                                                                            1260
     tacaattact aattaaagct gtgaatctgt tccctgctag/aacaaattca agatgggaag
     ttattgctaa ttacatgaac atacattctt cctctggagy caaaagaact gccaaagatg
                                                                            1380
     ttattggcaa agcaaagagt ctccaaaaac ttgaccctca tcaaaaagat gacataaata
                                                                            1440
     aaaaggcatt tgataagttc aaaaaagaac atggagyggt acctcaagca gacaacgcaa
     cgccttcaga acgatttgaa ggtccatata cagacxtcac cccttggaca acagaagaac
                                                                            1560
     agaagetttt ggaacaaget ttgaaaacat accoagtaaa tacacetgaa agatgggaaa
                                                                            1620
     aaatagcaga agcggtgcct ggcaggacaa agaaggactg catgaaacga tacaaggaac
                                                                            1680
     ttgtcgagat ggtaaaagca aagaaagctg ckcaagaaca agtgctgaat gcaagtagag
                                                                            1740
     ccaagaaatg acaatctttg ttgtgtgtgc/atttttataa taaaactgaa aatactgtaa
                                                                            1800
     1860
           <210> 9
           <211> 2291
           <212> DNA
           <213> Homo sapiens
           <400> 9
40
     gaatteetga etgecacagg/tgtacaggaa acatttgtet tttgttgetg gaaagetget
     caaatcaaag aacattta t gaagtcaaag tggtgccgcc ctacatctct caatgtggtt
     cgaataatta catcagagct ctatcgatca ctgggagatg teeteegtga tgttgatgee
                                                                             180
     aaggetttgg tgegetetga etttettetg gtgtatgggg atgteatete aaacateaat
                                                                             240
                                                                             300
     atcaccagag ccctt/gagga acacaggttg agacggaagc tagaaaaaaa tgtttctgtg
     atgacgatga tetteagga gteatecece ageeacecaa etegttgeca egaagacaat
45
                                                                             360
     gtggtagtgg ctgtggatag taccacaaac agggttctcc attttcagaa gacccagggt
                                                                             420
     ctccggcgtt tygcatttcc tctgagcctg tttcagggca gtagtgatgg agtggaggtt
                                                                             480
     egatatgatt kactggattg teatateage atetgttete eteaggtgge acaactettt
                                                                             540
     acagacaact/ttgactacca aactcgagat gactttgtgc gaggtctctt agtgaatgag
                                                                             600
50
     qaqatcctad qqaaccaqat ccacatqcac qtaacagcta aggaatatgg tgcccgtgtc
                                                                             660
                                                                             720
     tocaacct/c acatgtactc agctgtctgt gctgacgtca tccgccgatg ggtctaccct
                                                                             780
     ctcaccceag aggogaactt cactgacage accacccaga getgeactea ttcceggeac
     aacatc/tacc gagggcctga ggtcagcctg ggccatggca gcatcctaga ggaaaatgtg
     ctcct/ggct ctggcactgt cattggcage aattgcttta tcaccaacag tgtcattggc
                                                                             900
                                                                             960
55
     cccqdctqcc acattqqtqa taacqtqqtq ctqqaccaga cctacctqtq gcagggtqtt
      cga/tggcgg ctggagcaca gatccatcag tctctgcttt gtgacaatgc tgaggtcaag
                                                                            1020
      gaacgagtga cactgaaacc acgctctgtc ctcacttccc aggtggtcgt gggcccaaat
                                                                            1080
                                                                            1140
      a#cacgctgc ctgagggctc ggtgatctct ttgcaccctc cagatgcaga ggaagatgaa
      ∉atgatggcg agttcagtga tgattctggg gctgaccaag aaaaggacaa agtgaagatg
     /aaaggttaca atccagcaga agtaggagct gctggcaagg gctacctctg gaaagctgca
                                                                            1260
     ggcatgaaca tggaggaaga ggaggaactg cagcagaatc tgtggggact caagatcaac
                                                                            1320
     atggaagaag agagtgaaag tgaaagtgag caaagtatgg attctgagga gccggacagc
                                                                            1380
      cggggaggct cccctcagat ggatgacatc aaagtgttcc agaatgaagt tttaggaaca
                                                                            1440
```

43

```
ctacagcggg gcaaagagga gaacatttct tgtgacaatc tcgtcctgga aatcaactct
                                                                            1500
     ctcaagtatg cctataacgt aagtctaaag gaggtgatgc aggtactgag ccacgtggtc
                                                                            1560
     ctggagttcc ccctgcaaca gatggattcc ccgcttgact caagccgcta ctgtgccctg
                                                                            1620
     ctgcttcctc tgctaaaggc ctggagccct gtttttagga actacataaa gcgcgcagcc
                                                                            168/0
5
     gaccatttgg aagcgttagc agccattgag gacttcttcc tagagcatga agctcttggt
                                                                            17/40
     atttccatgg ccaaggtact gatggettte taccagetgg agateetgge tgaggaaaca
                                                                             1600
     attctgagct ggttcagcca aagagataca actgacaagg gccagcagtt gcgcaagaat
                                                                            1860
     caaCagctgc agaggttcat ccagtggcta aaagaggcag aagaggagtc atctgaaqat
                                                                            1920
     gactgaagtc acactgcctg ctcctttggg tgtgattgag tgccctcctg gctcctgggc
                                                                            1980
10
     tgggacaagt gaggaactag ctgcagaggg atgagtgacc accatccagg ctgagactga
                                                                            2040
     aaggagcaga ggctggaact acagtattet tteecetget agcaaccatg tgeeteecat
     cctgactgtg gagttgggat gtggaagtgg ggctggaaca aagcttctgc ctagggagga
                                                                            2160
     gctaagcagg cccggcagtt ggaggaaggc cagaggaaca gctttgtgct ccggcttycc
                                                                            2220
     ctcagggaac agcagagagc agttggctct ttctgctgct tgtatatgtt aatattaaaa
                                                                            2280
15
                                                                            2291
     gagagtggtg t
            <210> 10
            <211> 1580
            <212> DNA
            <213> Homo sapiens
            <400> 10
     atcocctccg gttttcctca gtctccacgt acgtccctca aagcgcgtcc taaaacccgg
     ataaccggag cgctccccat ggaccacacg gagggcttgc ccgcggagga gccgcctgcg
                                                                             120
     catgetecat egeetgggaa atttggtgag eggeetecae etaaacgaet tactagggaa
     gctatgcgaa attatttaaa agagcgaggg gatcaaacag tagttattct tcatgcaaaa
                                                                             240
     gttgcacaga agtcatatgg aaatgaaaaa aggttttttt gcccacctcc ttgtgtatat
                                                                             300
     cttatgggca gcggatggaa gaaaaaaaa gaacaaatgg aacgcgatgg ttgttctgaa
                                                                             420
     caagagtoto aaccgtgtgc atttattggg ataggaaat# gtgaccaaga aatgcagcag
     ctaaacttgg aaggaaagaa ctattgcaca gccaaaagat tgtatatatc tgactcagac
30
                                                                             480
     aagcgaaagc acttcatttt ttctgtaaag atgttctatg gcaacagtga tgacattggt
                                                                             540
     gtgttcctca gcaagcggat aaaagtcatc tccaaacctt ccaaaaagaa gcagtcattg
                                                                             600
     aaaaatgetg acttatgeat tgeeteagga acaa aggtgg etetgtttaa tegaetaega
     teccagacag ttagtaccag atacttgcat gtagaaggag gtaattttca tgccagttca
                                                                             720
35
     cagcagtggg gagccttttt tattcatctc trggatgatg atgaatcaga aggagaagaa
                                                                             780
     ttcacagtcc gagatgtcta catccattat /ggacaaacat gcaaacttgt gtgctcagtt
                                                                             840
     actggcatgg cactcccaag attgataaty atgaaagttg ataagcatac cgcattattg
                                                                             900
     gatgcagatg atcctgtgtc acaactccat aaatgtgcat tttaccttaa ggatacagaa
                                                                             960
     agaatgtatt tgtgcctttc tcaagaaaga ataattcaat ttcaggccac tccatgtcca
                                                                            1020
     aaagaaccaa ataaagagat gataaatgat ggcgcttcct ggacaatcat tagcacagat
                                                                            1080
     aaggcagagt atacatttta tgagggaatg ggccctgtcc ttgccccagt cactcctgtg
                                                                            1140
     cctgtggtag agagccttca gttgaatggc ggtggggacg tagcaatgct tgaacttaca
                                                                            1200
     ggacagaatt tcactccaaa tt/cacgagtg tggtttgggg atgtagaagc tgaaactatg
                                                                            1260
     tacaggtgtg gagagagtat gctctgtgtc gtcccagaca tttctgcatt ccgagaaggt
                                                                            1320
45
                                                                            1380
     tggagatggg tccggcaacc/agtccaggtt ccagtaactt tggtccgaaa tgatggaatc
     atttattcca ccagcotta¢ ctttacctac acaccagaac cagggocacg gccacattgc
                                                                            1440
     agtgtagcag gagcaatot tccagccaat tcaagccagg tgccccctaa cgaatcaaac
                                                                            1500
      acaaacagcg agggaagtta cacaaacgcc agcacaaatt caaccagtgt cacatcatct
                                                                            1560
      acagccacag tggtat/ccta
                                                                            1580
50
            <210> 11
            <211> 2809
            <212> DNA
            <213>/Homo sapiens
55
            <400> 11
      tggccggggg atggggcgcc ggtctgcctt gacagggttg caaagttgtt ttctaaattc
                                                                              60
                                                                              120
      cgaagcdccc etctgccccc tccccccaat ctgcttgcgt cgggggtggg gggtggggg
      gtcacetcct caggtttcgt tctttcaaac tttttgaaac cctaattggt ggcctctgag
                                                                             180
60
      tgggdctcgt ggactcccgc ctcctaagta actcttacca cgtcactagg ccaaagaggg
                                                                              240
      gcg/ggggtg aacgaaaggg etcccgaact ttttttttc cagccaggcc gaacgggggc
                                                                              360
      tc/qtaatqa ttqqccaqqq cqcatcactq cgaacctgtc aatcacgggt cctccgggtt
      g¢gaggggcg gaccaagccc caaccccggg gaatccgagc aggtatataa ggggcccagc
                                                                              420
```

4000

1

C

lab.

(S-3

ļab

N

J.

```
tagagcccag gcagactgtg aatgcgaect gttcgagaga actcatcagg tgcgagaage
     ccgcgggttc ctgctgattt ggcgcggagc attttgataa gcctaccctt cccqccqqac
                                                                            54,6
                                                                            660
     tegetggece acaggecece aageteeget cegacggagt eccagggect tttcaccgtg
                                                                            660
     geogetocag eccegggage geetteteet eccepeacqc tqqcqcacct tetteccqcc
5
                                                                            720
     ccggcaatgt acagcettet ggagactgaa ctcaagaace ccgtagggac acccacaca
     geggegggea ceggeggeec eqeageeceg ggaggegeag geaagagtag tgcgaacgea
                                                                           780
     geoggeggeg egaacteggg eggeggeage ageggtggtg egageggagg tqqeqqqqt
                                                                            840
     acagaccagg accgtgtgaa acggcccatg aacgccttca tggtatggtc ccgcgggcaq,
                                                                            900
                                                                           960
     cggcgcaaaa tggccctgga gaaccccaag atgcacaatt ctgagatcag caagcgctt
10
     ggcgccgact ggaaactgct gaccgacgcc gagaagcgac cattcatcga cgaggccaag
                                                                          1020
     cgacttcgcg ccgtgcacat gaaggagtat ccggactaca agtaccgacc gcgccgcaag
                                                                          1080
     accaagacgc tgctcaagaa agataagtac tccctgccca gcggcctcct gcctgccggt
                                                                          1140
     geogogocy cogocycogo tycogogoc geagocycty cogocagoay tocggtyggo
                                                                          1200
     gtgggccagc gcctggacac gtacacgcac gtgaacggct gggccaacgg cg/gtactcg
                                                                           1260
15
     ctgqtqcaqq aqcaqctqqq ctacqcqcaq ccccqaqca tqaqcaqccc qccqccqccq
                                                                          1320
     cocgegotigo acceptacea categoroge otecagtaca goccaateat dececego
                                                                          1380
     gctcagagct acatgaacgt cgctgccgcg gccgccgccg cctcgggcta cgggggcatg
                                                                          1440
     gegeeeteag ceacageage egeggeegee geetaeggge ageageeege cacegeegeg
                                                                          1500
     geogragety eggeograge egecatgage etgggeecca tgggetygt agtgaagtet
                                                                           1560
     gageccaget egeogecgee egecategea tegeactete agegegegtg ceteggegae
                                                                          1620
     ctgcgcgaca tgatcagcat gtacctgcca cccggcgggg acgcgccga cgccgcctct
                                                                           1680
     ccgctgcccg gcggtcgcct gcacggcgtg caccagcact acoaggace cgggactgca
                                                                           1740
     gtcaacggaa cggtgccgct gacccacatc tgagcaccgg cgtgcgctcg tccacccttg
                                                                          1800
     ttccccaccc ccacccccac tcccgccccg cacccccaag ttgggtcgcc ttgtttagct
                                                                           1860
     ttgcttqcct gggactgttg ccttgtaccg atgatgggga/gggctgaaag ttttgctgta
                                                                           1920
     gctgtcgggt tttgtacaaa agtcaaaaat aagtcaggag cagcgaaaat gggatcttct
                                                                           1980
     agagagetet ettgeeceae geegetgete ettteaegtt tgtaggetgg gaategetgt
                                                                           2040
     gttatttgca aagaaaaac agcccccact cctcctcctg agttccaggg ttattctgtt
                                                                           2100
     acatttgaaa atgttgtctt gttagtttgc agttagccaa ggagtgaatg ggagaaacat
                                                                           2160
     agtategggt gaggtecage tggagaactg caaggectae geecceagte gtgtegegte
     tgttttcctc gaggtttttt ggggcgctga cc/ctccaag cagcgcggca gctaaagcca
                                                                           2280
     atgttaattt atagccaggt gtgcgtgtgt coccgcctc gccgccctg gccgcgggac
                                                                           2340
     agettetgte caatcatgtt gagttggtga /ttetgeegt gatetgtttg atatttette
     gcgctaatgt gttcagattt cgtttgggta gtggggaggg gctactttgt ttcagggttt
                                                                           2460
35
     tcaagetttt actettaatt cetaaatgag atcaataaat tttataace
                                                                           2509
           <210> 12
            <211> 8372
            <212> DNA
40
           <213> Homo sapiens
           <400> 12
      aagettggtg ccatctattt/tggactatgc cttgcataca gctttatggg aacatttgtc
                                                                             60
      aggcaaaagt ataataatgg caaactctac gccttttatt ttaaattaga ttggtgtgat
                                                                            120
45
      ttgatgctga cgggagtgag agtaatggcc ttatcctgct gcaggctgtg ctgaggatgg
     cctggtctgc caccctctc gagtagcatt ttgcatgtgt aacagggtct cccctctggg
                                                                            240
                                                                            300
      qcacaacaac aaaqagaagt tqctaaqqac aagaagcagg tgcggaaatg catctcccat
     tggaacagec etgggettac tecaatgget gagagaggtg etatggecag tecteccaga
                                                                            360
     getetgeage tgc/cttggg ggtggacagt etegtgettg teetgegtga taacggeegt
                                                                            420
     gaaagccagc caactgctgc ccaaaatcac ccagccgatt gggggtttcc catcggcgca
                                                                            480
50
     ccctgcccgg agccaagaag acaggctggt gctgctgtat ttgtatttat atccattgct
                                                                            540
                                                                            600
      gegetetgeg /tetegtgge aegeetggae acteeteege etececetee tetteeteet
                                                                            660
      ccaqqqccac/ctccccqcct tccccaccc catctgcttc tgtcaaatga gaaagtcacc
                                                                            720
      gaggagaaoc caaacactcc agccgctgag agcccccttt ggcacttggc agcacgcggc
      ggcgggct/cc teggetcaac ttegaggagt cteegegacg caacttttgg ggacgetttg
                                                                            780
55
                                                                            840
      catttaa/gag agaacgaccg aggaggagga gegetetgee eggeegeege tacetgeggg
                                                                            900
      gaget dacca geaaacgeca etgeagacga aggacecaaa gaacgtaaag ggeaaactge
      cgccgcgggg agggggcacc gccgagaagt tagagtgtcc cagagacaac ctgctcgagc
                                                                            960
                                                                           1020
      gctq/ggccgg agacactaag gcggcccggg gcgcggcgtg gccctggctg gtcccccagc
                                                                           1080
      60
      ct/cgcgggc agccaacatt gatttcctcc gggccgaggg cgagggcccg ggcggcggcg
                                                                           1140
      ggctgcagec gcggcagggc gagagcatgt ccaagccggt ggaccacgtc aagcggccca
                                                                           1200
```

fqaacqcctt catqqtqtqq tcqcqqqctc agcqgcgcaa gatggcccag gagaacccca

1260

STOULCH CLEA

						1
agatgcacaa	ctcggagatc	agcaagcgct	tgggcgccga	gtggaaactg	ctcacagagt	1370
cggagaagcg	gccgttcatc	gacgaggcca	agcgtctacg	cgccatgcac	atgaaggagc	13/80
			agcccaagac			1/440
tegeetteee	ggtgccctac	ggcergggeg	gcgtggcgga	cgccgagcac	cctgcgctca	1500
			gcggcggcct			1560
			ccgctgccgc			1620
			ccgccgccgc			/ 1680 1740
			cgggcgcctt			1800
			acacgcactc			1860
cagactacat	gatecegtee	aactgcagcg	cgtggcccag	ccccaaacta	caggggaacc	1920
			agccccagct			1980
			cctcgcgagg			2040
			ccgtgcgccc			2100
			ggtagaggca			2160
			caggcctgtg			2220
acccgcactt	cggcagccaa	ctcgaaagca	gacaattata	tgcggcagca/	attaacattt	2280
gctttgcact	toggaacetg	ttgcgttttg	acccacggag	gtggaggagt	aactttttga	2340
catgttggcc	tttccagttt	tgttggaagt	ttcatggtcg	gttttgtt/tt	tgtttctcat	2400
tcttcttcct	cgcccctcag	cccccaacc	cccaaccccc	teceggyceg	tgttgcatgc	2460
			tggcacacgg			2520
			cctcgcctcc			2580
ttgcagatct	ctgttctctc	aagcagaact	cccaaccaga	tccattcttg	accagtgacc	2640
			tcacggnttc			2700
			gcaagaaacg			2760
gatgaaagtt	gtcaattgga	ttttcttcct	aaacaaacaa	caacaacaaa	ctactagaag	2820
			acacagttta			2880 2940
			cttaagattg			3000
			ttcgttgccc ttaactttta			3060
			acttettta			3120
gaategeaat	actaccgaag	accadaccag	aattgtttca	acagatatat	ctcattttca	3180
actagcattt	ctctcccaag	ttgagctggt	ttaatgtgtt	ttggatttcc	ctcctcaatt	3240
			tgcaaattg			3300
aaaaggaacc	ttcaattatt	agctttgttt	ctttttaaat	gtatatattt	tgactaatgt	3360
ttgtgaatga	agttggctaa	catqtattt	ctttttaaat gtttcatttt	ggctttatgt	aatataaagt	3420
ttttaaaatt	ttaaatatqq	ttttaacott	ťatgtgtaaa	tgattttcta	gtgtgacctt	3480
ctaatttaat	attagacgtc	taaggtatat	ctgtaaatta	gaateegaet	atcactctgt	3540
tcatttttt	tgaacaaaga	gtttagataa	agcctgaacc	agggaaaaga	aaaatcttct	3600
atttcttgtt	gagttcctaa	caagattttt	atctgaattg	cccttacgtg	cctggtccag	3660
			ctttgtttca			3720
gaaatctaaa	tcaagccatt	gttattcaga	gccaaaaacc	tgatttatca	catttttaat	3780
cgtgaatagg	aaagaagatt	ttaaaaaagc	ccaagtcgtt	gtattagctt	taacaacaac	3840
aaaaaaagg	cattcatgaa	ccagtagaac	agagcccatt	gaaaacatcc	agacctttca	3900
aagcatttca	ccagtttcta	gtaacatttt	aagaggggaa	agttgcttga	ccactttatc	3960 4020
			cagtgtaatt			4020
			ggaaggataa			4140
caaattttgg	tagaaraaat	tagatttata	gttatgctaa gggctagaca	aattaataat	gragaagrar	4200
			aaatagaaga			4260
			gaaattctca			4320
			gagetgeacg			4380
			taatatttta			4440
			ccctgattca			4500
cctgttattd	cctgagctct	ttgcaatatt	ataagttaat	tcatatggtt	ctgagcgatt	4560
atgcaaaaqt	aatttggact	gtccaggggt	aattatccct	gacacggtta	attaaatcct	4620
ttcaaggott	cgtctttccc	ttttgtagca	gcccatccct	tctcaacacg	gaacttctgc	4680
ggctcg / tgg	aaatcacccc	agccctaaat	cttagttacc	accctgagcc	ttccagctcg	4740
gccgcgtcct	cggcctgaag	actccccgcc	tectecegee	ccctcccctt	ttcccaaaga	4800
tcag/gtttt	ctgggagaaa	cgctccggag	ttgttgatga	atgagaagag	gactggaaag	4860
atg g gtaaga	ggaggggtga	ggatgccgag	ggggagcacc	gaggtcatat	cgccaacaga	4920
ttgtgcggct	gtttgaggac	ctccacaggc	cccacagact	cgtttatcac	ccattctgac	4980 5040
Lycaatggtc	Ligitaadaa	grtggegggt	tttgcgcctg	cagagageet	ccigccaagi	3040

BOTOL OTHEO

```
tagactgtgc agaagtaagg ggttggagcg gggggagcgg ctccggggca agagggcgta
                                                                     5100
gagaaaggcc cggggnnggg nggtgtaagc gtctgaaagt ggcccacaaa tgcagcgctg
                                                                     5160
tgattgggca gagagetget getggetege gatetetate tecatetett tatetatete
                                                                     5226
                                                                     52/80
totttcttct ttcccttcct tttattcttc tattttcgtt tcttttcaag gtttttttta
                                                                     5,540
aagccatgat gcaatttctt tggtattcac cgttgtccca aaacttgaag caagcctcqt
                                                                     5400
atccaagggg ccaggcatgt tgcttcgggc tttgtgcaaa caggtggaat tgcgctqtgt
                                                                     5460
aagcagtaag aactggtgct ggggagctgt cgcgcgaggg ggtggctttg ggagagcagg
                                                                     5520
gttgctggcc gcgattgtta cttcccttga caatttcctc ctccccctcc cccaaqaaqa
                                                                     5580
taggagaaag caccgcggat ctccctctca ccccaggctc ggggcgcaga agatggagag,
                                                                     5640
                                                                     5700
aagattecae teteecegga geagataggg acggtegege cagecaatea gagegeggef
eggegeegge geteeeggee geetgggeeg ceqtgteete caggeaageg aagtteede
                                                                     5760
aactogtoog cotogagggt cogogtottt ottgogooog oggeocagog gaggoogágg
                                                                     5820
gageegteea aactitatta ateteteete etttettet eeeteageee agtgeaftete
                                                                     5880
aaaggtcagc cctcttcttt taaaagactg atattattaa tgcactgaca attcotccc
                                                                     5940
cccttttctt ttttctctct tgcaggggg aaaaaaaggg aaatggtgaa aagagctttt
                                                                     6000
tttatccttt ttttttttt qtccttcagt gggagcgttt agacagtcga ggaggttttg
                                                                     6060
teegagaaca aaacqeaggg ttgggaggtt ttgtgagagt gttgtttgtt gaagtggage
                                                                     6120
taaqaaaaaq cqqcqqcttt ctcctcattq tqaaqaaacc aatcagtqqt atttqqaaaa
                                                                     6180
ctgttagcat tgtgcacttc ttctgtgtcc attgtgaggc gtttctttt acaaggtttt
                                                                     6240
tttttcagcc gatccagctg gccggaatga atagcggtgc aatgtgtaca cgctttgtcc
                                                                     6300
ctccqqcctt caaqtaqccc ccattqaata qactaaqttq acctqcqfqa caqtqaaaca
                                                                     6360
acataataaa aaatacatga gcccctgaat aggagcaggc gcataaataa ataaaatggg
                                                                     6420
                                                                     6480
tgaccaaaac tggataaact gaatgacaaa acggtgaaag gggaacaaaa agatatttaa
cacqctagat tagcattaga atqcgatcta caaqqcagaa caaltqatga atagqtttac
                                                                     6540
cggccaagaa agaaatggac taaatgccct ttgaatagat atgctttttg caagggcttt
                                                                     6600
gaatagatat gcttttgcaa gggctgaatg ggaaaaggta aagatgaagc tatgcaaatg
                                                                     6660
agccggggaa ctttttatat atattcttta aacacacaca/cacactgcgg ggggaagagt
                                                                     6720
qctqcctcqq qatqtttata qaagcaataa ttqccattax tagcattqtc tqcqqcagat
                                                                     6780
                                                                     6840
agaaattgaa caggttggga taatataggg tagcagtaét tattcttcta attaatggtc
ctttqctact tqaaaaaaqa aaaaaqqaaa qaaqtaqtaa aaqttatqca qaaqttatqt
                                                                     6900
                                                                     6960
ttccttqtqt ccatttqccc agcqctqqaa tctqtqqaqc aggaagcctq gcaattccaa
gatacgcgat gatcytcaaa cattcccggg agcc/gtcct gaggctctgg cttcagggcc
tagtttccat ttatqccqcq tttttqaqaq tctatactg tgtctggcac atggtaggtg
                                                                     7080
ctcactgaat agtcgtggta tgaatgaatg aa/cgaatgaa tgaatgaatg aatgaatata
                                                                     7140
agtttaatgg gggaaacccg ggcctcctaa yaaaggtagg ggctggggga tacctagggg
                                                                     7200
cttccccaqq aqqatttctt ttttcatcat/cccaccctg ggagaaaggt ccacgcagga
                                                                     7260
tggtcgcttc ccccttgctg agagttttg& cttcagccta tctgggccgc tggaaaagag
                                                                     7320
gagaagaata aacaagagac aagcaact c tcccctaccg gcgttccgtc cttgtcctca
                                                                     7380
                                                                     7440
ctgccaaatc cactccaaag ccgaggatgg tgagactgtg aagttgcaaa gaaacacaga
gcccaccccc ttaaagaatt acgatatatt taaagtttgc ctctttcagg tttctctcct
                                                                     7500
tggctcctgc ccctttcccc tcccggctcc ttgtccttga ctgaacctca tgggacagag
                                                                     7560
aacctcctqt cccccacqaq gcaaqqcqcq aacccqcaga gatctggggt gccctttggt
                                                                     7620
tecetgeget gecetggagg cg/ccataga ggcetttgcc gccaaggaca gcaattgttt
                                                                     7680
                                                                     7740
tattttcgat ggttgctcgc caggctgcgg gtcgcgggcc cacccagccg tcgaactttc
caqtcqttat caqcqctqct &ctaacttaa tggaataatg caaattatag cctgcccagc
                                                                     7800
tgacacgtec etgegaatgc/geeggggetg agetetggee ageegetete tegacgteet
                                                                     7860
ggacggccgg agggaatgaa gctctgaatt gtgacaaaag tggggggggc accccaaatt
                                                                     7920
ctcaaagcaa tgttctttt tttttctttt ttcttaagca attgagcctt accaaatgtc
                                                                     7980
ggggeeggee geaeggaage ettgeatatt ttaaagtgta acctgageet tegeggttte
                                                                     8040
                                                                     8100
agetteaett aaaacatgea aattettgaa attgaaaaat etgaaaaact teegaagagt
tctatctgaa taaakccaaa tccattggga gtcgctttga ggagacaaaa cgcacagcga
                                                                     8160
tttggggtga ggggtatttg tggggaggca ggacgtgctg gattgggttt ccagggtcaa
                                                                     8220
ggtgtctctg gg/cttcgac gatagcctta gcgcagagca gggaagtggc accgctaggc
                                                                     8280
agcaagetca gftgetetac ttttgtgacc catecececa eccececcac egecacectt
                                                                     8340
                                                                     8372
gcctccgggc Cactgcccct ctctgcaagc tt
```

<210> 13 <211> 4877 <212> DNA <213> Homo sapiens <400> 13

5

10

15

30

35

40

45

50

55

60

40510

ũ

'n.

E)

	gcccgaaacc	cggaagtgag	cggcggcagc	tgcgaggctc	ggagaaacag	gcgccgcggg	6e/
	ctccgcgccc	ggccggaccc	gggcccgaga	tcatgatgct	gccgccaccg	ccgccaccac	1/20
	ggagcgagaa	gcccagatag	acgccccggc	ggccccgggt	cctggagtcc	cgccgcctgc	1 80
	tgcccggccg	aggaccccac	cccgcctgcc	gcccgatgct	tgcagtgggg	cccgccatgg	/240
	acagggatta	cccgcagcat	gaacccccgc	cggcgggcag	cctcctgtac	agcccgccgc	/ 300
	ccctgcagag	cgccatgctg	cactgcccct	actggaacac	cttctcgctg	ccgccatacc	/ 360
	ctgccttctc	cagcgacagc	cgcccgttca	tgagctccgc	ctccttcctc	ggcagccagc	/ 420
	cctgcccaga	caccagctat	gcccccgtgg	ccaccgcctc	cagcttgcca	ccaaagacct/	480
	gcgactttgc	tcaggactcc	tcctattttg	aggacttctc	caacatctcc	atcttctcc	540
	cgtccgtgga	ctccctgtcg	gacatcgtgg	acacgcccga	cttcctgccg	gctgacagec	600
	teaaccaggt	gtccaccatc	tgggacgata	accetgeece	ctccacccac	gataag g tgt	660
			gcaggcttcg				720
	ttetegteag	ctaccaggag	cagagtgtgc	agagecagee	agaggaggag	gacgaggetg	780
			ctggggcaca				840
			cacccagacc				900
			tacaccctgg				960
			acctacgcct				1020 1080
	coggagetest	gggcccccc	ateggegatg cacetgegeg	gggceggegt	gggcaaagge	cygacygtgg	1140
	ccaacgaccat	caagtaggaat	gcggagcgcg	geeggaagaa	agcattgugg	reagegret	1200
	caatacacac	actcaacaaa	atcaagtacg	ataacaccac	tacctcagag	acgygcateg	1260
			attggggaga				1320
			tgtggggagg				1380
			ggctccacca				1440
			gtggtctacg				1500
	acatgateta	catgageege	ttgggtatct	agagagaaaa	cacacccttc	cagaacttta	1560
	aggagttect	gcacgccatc	gagaagaggg	acattaacac	catggagate	ataaccataa	1620
			tacatcgcac				1680
			gccccagcct				1740
			gtgttccagc				1800
	gcaagtccct	gtggggccag	ttctggtcgg	cacaccageg	cttcttcaaq	tatctqtqca	1860
			ctggtggagc				1920
			tecaegggeg				1980
	acgatgggca	cctcaactgc	ttcgtctcgg/	ccgctgaagg	cgtgttcctg	togotaatto	2040
	agaagcactt	tccgtccacc	aagagaaagc	gggacagagg	agcgggcagc	aagcggaaac	2100
	ggcgacctcg	gggacgcggg	gccaaagecc	cccggctggc	gtgcgagaca	gegggegtea	2160
	teegeateag	tgacgacagc	agcacggagt	cggaccctgg	cctggacagc	gacttcaact	2220
			gatgacgacg				2280
			tgcctcctgc				2340
			carggatetge				2400
			gageteateg				2460
	agatgaccgg	caggaaaggc/	cgcgtggtgt	ccaggcccga	cgggacggtg	gccttcgagt	2520
			tccatcgacc				2580
			gccatcatct				2640
	aagccgaccg	ccgtgtccag	aaccagcggc	gccgcgtgca	catgacettg	gagetgeegt	2700
			cagcagttcg				2760
			atctcggagc				2820
			ctgggggccc				2880 2940
	cccgtgacct		aactttgaga				3000
			cagactgaga				3060
			cgggacatga				3120
			tgcctggacg gaggtgcaca				3180
			gaggtgcaca				3240
			gaggagatct				3300
			caggtggtct				3360
			aagtcgctgg				3420
			aacaagccca				3480
,			cccaacatcg				3540
/			cgggtcaccg				3600
/			cactgcagcc				3660
			ctgcaggggc				3720
			ggccgcatcg				3780

```
gctacctgca gatcgtgcgg ctgaagacca aggacaggaa gaagcaagtg ggcatcaaga
                                                                            3840
     tccccgaggg ctgcgtgcgc cgggtgctgc aggagctgcg gctgatggat gcggacqtga
                                                                            3900
                                                                            3960
     agegeaggea ggegeeegee etgggetgee cegeeeegee egeeegge eegetggege
     tgccttgcgg ccccggagag gtgctggacc tcacctacag ccccccqqcc gagqccttcc
                                                                            1020
5
     egeogeecce geacttetet tteceggege egetgteect ggaegeegge eeeggeqteq
                                                                            4080
     tgecgctggg cacccccgac gcccaggccg accctgcggc cctcgcgcac cagggctgcg
                                                                            4140
     acateaactt caaggaggtg ctggaggaca tgctgcgctc gctgcacgcg qggccqccct
                                                                            4200
     ccgagggcgc gctgggggag ggcgcggggg cggggggcgc ggcgggcggt ggtcccqaqg
                                                                            4260
     ggcaqageqt gatecagtte ageceaceet tecceqqeqe ecaqqeteet etetqacad
                                                                            4320
10
     cctttaggcg aaacatgccc caagacacag ggaccgtttc tcccctagga qcaqcqqtqq
                                                                            4380
     ggaggaggg caaggteece tgaccactge teagaggage cetaggeect ggeegeagtg
                                                                            4440
     cetteagege cegaceeggg ceeceacetg gteagecetg geggggecea eteaggacag
                                                                            4500
     ctgggggccg gggcgtggca gggccctctc tgtgcctctc ctcctaagta ggaa/gggct
                                                                            4560
     ccgggtggct gctctgggac tgggcaccca caagggctca gtgggcccaa acccttgaaa
                                                                            4620
15
     tccgtgaaac cgggtggtcc caagagctag aaactcagga aaccccaggt gotcagggcc
                                                                            4680
     ccgcgteteg ggggctccgt ggggcagacc cctgctaata tatgcaattc tccctcccc
                                                                            4740
     agcccttccc tgacccctaa gttattgccc gctcacctct cccaggcccc/aggccgcgga
                                                                            4800
     gctggcaggg tggcgcctgc ggtttctatg tatttatagc aagttctgaz gtacatatgt
                                                                            4860
     aaaggacttt tttaaat
                                                                            4877
20
            <210> 14
            <211> 1872
            <212> DNA
            <213> Homo sapiens
            <400> 14
     tcaggctgcc tgatctgccc agctttccag ctttcctctg/gattccggcc tctggtcatc
                                                                              60
     cetececace etetetecaa ggecetetee tggtetece tettetagaa eccetteete
                                                                             120
     cacctecete tetquaquae tteteettta coccecacée cocaccactg coccetttee
                                                                             180
     ttttctqacc tccttttgqa gqqctcaqcg ctgcccadac cataggagag atgtgggagg
                                                                             240
     ctcagttcct gggcttgctg tttctgcagc cgctttgggt ggctccagtg aagcctctcc
                                                                             300
     agccaggggc tgaggtcccg gtggtgtggg cccaggaggg ggctcctgcc cagctcccct
                                                                             360
     qcaqcccac aatcccctc caqqatctca gccttctgcg aagagcaggg gtcacttggc
                                                                             420
     ageatcagee agacagtggc cegecegetg cegeceegg ceateceetg geeceeggee
                                                                             480
     ctcaccegge ggegecetec teetggggge caggeceeg cegetacaeg gtgetgageg
                                                                             540
                                                                             600
     tqqqtcccqq aqqcctqcqc aqcgqgaqgc */gcccctgca gccccgcgtc cagctggatg
                                                                             660
     agegeggeeg geagegegg gacttetege/tatggetgeg cecageeegg egegeggaeg
     coggogagta cogogogog gtgcacoto, gggacogogo cototootgo cgcotoogto
                                                                             720
     tgcgcctggg ccaggcctcg atgactgc/a gccccccagg atctctcaga gcctccgact
                                                                             780
40
     gggtcatttt gaactgctcc ttcagccgcc ctgaccgccc agcctctgtg cattggttcc
                                                                             840
     ggaaccgggg ccagggccga gtccct/gtcc gggagtcccc ccatcaccac ttagcggaaa
                                                                             900
     getteetett eetgeeccaa gteageccca tggactetgg gecetgggge tgeateetea
                                                                             960
     cctacagaga tggcttcaac gtctccatca tgtataacct cactgttctg ggtctggagc
     ccccaactcc cttgacagtg taggctggag caggttccag ggtggggctg ccctgccgcc
                                                                            1080
     tgcctgctgg tgtggggacc cggtctttcc tcactgccaa gtggactcct cctgggggag
                                                                            1140
45
     gccctgacct cctggtgact ggagacaatg gcgactttac ccttcgacta gaggatgtga
                                                                            1200
     qccaqqccca qqctqqqacc/tacacctqcc atatccatct qcaqqaacag caqctcaatg
                                                                            1260
     ccactgtcac attggcaate atcacagtga ctcccaaatc ctttgggtca cctggatccc
                                                                            1320
     tggggaaget getttgtgag gtgactccag tatetggaca agaacgettt gtgtggaget
                                                                            1380
     ctctggacac cccatcceag aggagtttct caggaccttg gctggaggca caggaggccc
                                                                            1440
50
                                                                            1500
      ageteettte ccageextgg caatgecage tgtaccaggg ggagaggett ettggagcag
                                                                            1560
     cagtgtactt cacagagetg totageccag gtgcccaacg ctctgggaga gccccaggtg
      ccctcccage aggc/cacctc ctgctgtttc tcacccttgg tgtcctttct ctgctccttt
                                                                            1620
                                                                            1680
      tggtgactgg agcctttggc tttcaccttt ggagaagaca gtggcgacca agacgatttt
      ctgccttaga gc#agggatt caccctcgcc aggctcagag caagatagag gagctggagc
                                                                            1740
55
                                                                            1800
      aagaaccgga gecggagccg gagccggaac cggagcccga gcccgagccc gagccggagc
      agetetgace #ggagetgag geagecagea gateteagea geceagteea aataaaegte
                                                                            1860
                                                                            1872
      ctgtctagca/gc
60
            <21,0> 15
            <21/1> 1201
            <212> DNA
            ∮213> Homo sapiens
```

C)

```
<400> 15
      gagtctacgg cattgctgag gacgctgccc agggcatcgc taatgaggac gccgaccagg
      gcatcgctaa tgaggacacc acccagtgca tcgccaacga ggaagccgcc cagggcatcg
5
      ccgaggacgc catccagggc atcgccaacg aggaggttgc ccagggcatc gccaatgggg
                                                                              1/80
      tegeogeaca gggcategee aatgaggaeg ceaeceaggg categeeaac tgggaegeeg
                                                                             ′24∩
      tecaeggett egecaaeggg gaegeegtee teagettege caaeggggae geegeeeagg
                                                                             300
      gcatcgccaa cggggacgcc accaagggca tgggcaacga ggtcaccatc cacggcatcg
                                                                             360
      ctaacgagga cgccgtccag ggcatcgcta acgaggtggc cgcccagggc atcgccaacg
                                                                             420
10
      aggacgccgc ccagggaatc gccgaggatg tcgcacaggg catcgccaac gaggacgccg
                                                                             480
      cocagggcat cgccaacaag gaggccgccc agggcatcgc caacgaggac gccgcccagg
                                                                             540
      gaatcgctga ggacgtcgca cagggcatcg ccaacgagga tgccgcccag ggcatcgcca
                                                                             600
      acgaggagge egeceaggge ategecaaca gggtegeege ceagggeate gecaat/gacg
                                                                             660
      ccacccaggg catcgccgag gacaccgcca ggctttnnca acgacgaacg ccgtpcaagg
                                                                             720
15
      cattggttaa cgaggacgcc gtcttgggca ttggccaacg aacnacgccg tncaaggcat
                                                                             780
      tngnttaatg aaaaaatgga gttccaccgg tattcgaata accaaggaca cccgnccaag
                                                                             840
      ggcattggnc naactgggga cttccgtcca agggcctttn cccaangggg gacccccgcc
                                                                             900
      caagggccct cctttaatgg gggtcgnccg nccangggcc tttntttacn/ggggaccccc
                                                                             960
      tocaangggc attttntttt ttnggggncc ccccccaag gggttccct / tganggggaa
20
     gtttttccac gggatttttt taaaaaggga connetteee ngggentt/t ttttanaaag
                                                                            1080
      gacccattcc aantttttgn ttgnaaaggg acccnttcct ngggtttant aaanngggac
                                                                            1140
      corneccang ggntttatta aattggaane cececeangg gntttytta ttnggaceee
                                                                            1200
                                                                            1201
            <210> 16
            <211> 748
            <212> DNA
            <213> Homo sapiens
30
            <400> 16
     gagtctacgg cattgctgag gacgctgccc agggcatcgc taatgaggac gccgaccagg
      quatcactaa tgaggacacc acccagtgca tcgccaacga ggaagccgcc cagggcatcg
                                                                             120
      ccgaggacgc catccagggc atcgccaacg aggaggttgc ccagggcatc gccaatgggg
      tegeegeaca gggeategee aatgaggaeg egaceeaggg categeeaae tgggaegeeg
                                                                             240
35
      tocacggott cgccaacggg gacgccgtcc */cagcttcgc caacggggac gccgcccagg
     gcatcgccaa cggggacgcc accaagggca/tgggcaacga ggtcaccatc cacggcatcg
     ctaacgagga cgccgtccag ggcatcgcta acgaggtggc cgcccagggc atcgccaacg
                                                                             420
     aggacgccgc ccagggaatc gccgaggatg tcgcacaggg catcgccaac gaggacgccg
     cccagggcat cgccaacaag gaggccgccc agggcatcgc caacgaggac gccgcccagg
40
     gaatcgctga ggacgtcgca caggggatcg ccaacgagga tgccqcccag qqcatcqcca
     acgaggagge egeceaggge ategécaaca gggtegeege ceagggeate gecaatgaeg
                                                                             660
     ccacccaggg catcgccgag gacaccgcca ggctttnnca acgacgaacg ccgtncaagg
                                                                             720
     cattggttaa cgaggacgcc gt/cttggg
                                                                             748
45
           <210> 17
           <211> 1232
            <212> DNA
            <213> Homo sapiens
50
            <400> 17
     ctgaggctgg ggct/gggct ggggctgagg ctggagctgg gactgaggct ggggctgggg
                                                                              60
     ctggggctgg ggc/gaggct ggggctgggg ctggggctgg ggctgggact gaggctgggg
                                                                             120
     ctggggctga gg&tggggct gggactgagg ctggggctgg gactgaggct ggggctgggg
                                                                             180
                                                                             240
     ctqaqqttqq qqctqqqact qaqqctqqqq ctanqqctqq qqctqaqqct qqqqctaqqq
55
                                                                             300
     ctnaggctga Agttggggct ggggctggng ctgacgctgg ggctgaggct nggnctgagg
                                                                             360
     ctggagctgg/ggctgangct ggggctgggg ctgnngctga nctggggctg aggctccngc
                                                                             420
      tqaaqctqad qctqqqqcnt aacqctqaqc tnqnnqctqq tqctnatgct tqnctnanaa
                                                                             480
      tgngnatg/n ctgnggctnn cntccnngac aaananttnn aacttgnggt ttnntcctgg
                                                                             540
      gaatnnadat ntccaccann tntgnaaant tangcnnttn ggacnaanaa anantcnnna
60
     antictainne encenanana thetaggana tgtttacaca agcaannath thancanate
                                                                             600
                                                                             660
     annocycate ntttaaannt gnattnaaaa naaanantga aangneenen ttnaneenen
                                                                             720
     ttnttaantn gnnaacntna ctnactnnca nanatnttaa aantnggaaa caancacacn
                                                                             780
      nttt/hanacn nctnacttcg gagaataaan actenneetn nnaatgnete agaenaceen
```

ntcnttngng cacnnnaaaa tnanancett ettnttttga taccennaaa aaanaaaaac cactttnaan aannntttta ttennaatnn enannntnta canaggntnt teacattetn anchinattin tecanninia tinineeetn tinnnennat attinneana ananantinni cnnnnnacn nncncccnta nnaatattgc acaacnnaan aatannacnn nnttntataa aaatcanaan antancacna cnccnnnatc cctanaagtg nttaaaactc tatgtnennc nntctntaat ntannncaaa tanannnctn nttggnnnat caccannach tnnnanaccc nannectant annuntaenn cagenneann tnettnnntn tntntnnana acceaactee cttatttnat ancanntcac tetecentat en <210> 18 <211> 387 <212> PRT <213> Homo sapiens <400> 18 Met Tyr Ser Met Met Met Glu Thr Asp Leu His Ser Pro Gl∦ Gly Ala Gln Ala Pro Thr Asn Leu Ser Gly Pro Ala Gly Ala Gly Gly Gly Asp Arg Val Lys Arg Pro Met Asn Ala Phe Met Val Trp Ser Arg Gly Gin Arg Arg Lys Met Ala Gln Glu Asn Pro Lys Met His Asn Ser Glu ‡le Ser Lys Arg Leu Gly Ala Glu Trp Lys Va∕l Met Ser Glu Ala Glu Lys Arg Pro Phe Ile Asp Glu Ala Lys Arg/Leu Arg Ala Leu His Met 100 105 Lys Glu His Pro Asp Tyr Lys Tyr Arg Pro Arg Arg Lys Thr Lys Thr 120 Leu Leu Lys Lys Asp Lys Tyr Ser Ley Ala Gly Gly Leu Leu Ala Ala 135 Gly Ala Gly Gly Gly Gly Ala Ala Mat Gly Val Gly Val Gly 150 155

Val Gly Ala Ala Pro Val Gly Gl/A Arg Leu Glu Ser Pro Gly Gly Ala

200

215

*1*230

310

375

325

185

35

30

43

Li

113

jus.

C

23 40

5

10

15

Ala Gly Gly Ala Tyr Ala His Val Asn Gly Trp Ala Asn Gly Ala Tyr 180 Pro Gly Ser Val Ala Ala Ala Ala Ala Ala Ala Ala Met Met Gln Glu Ala Gln Leu Ala Tyr Gly/Gln His Pro Gly Ala Gly Gly Ala His Pro

260

His Arg Thr Pro Ala Has Pro His Pro His His Pro His Ala His Pro 45 His Asn Pro Gln Pro Met His Arg Tyr Asp Met Gly Ala Leu Gln Tyr

50 275

55

Arg Gly Met Ile Ser Met Tyr Leu Pro Ala Gly Glu Gly Gly Asp Pro 340 60

250 Ser Pro Ile Ser Asn Ser Gln Gly Tyr Met Ser Ala Ser Pro Ser Gly 265 Tyr Gly Gly Ley Pro Tyr Gly Ala Ala Ala Ala Ala Ala Ala Ala His

170

280 Gln Asn Ser Ala Val Ala Ala Ala Ala Ala Ala Ala Ala Ala Ser Ser Gly Ala Ley Gly Ala Leu Gly Ser Leu Val Lys Ser Glu Pro Ser Gly

235

315 Ser Pro Pro Ala Pro Ala His Ser Arg Ala Pro Cys Pro Gly Asp Leu 330

345 Ala Ala Ala Ala Ala Ala Ala Ala Gln Ser Arg Leu His Ser Leu Pro 360 Gln/His Tyr Gln Gly Ala Gly Ala Gly Val Asn Gly Thr Val Pro Leu

900 **8**60

Thr His Ile 385

5

10

15

20

<210> 19 <211> 317

<212> PRT <213> Homo sapiens

<400> 19 Met Tyr Asn Met Met Glu Thr Glu Leu Lys Pro Pro Gly Pro Gln G/n Thr Ser Gly Gly Gly Gly Asn Ser Thr Ala Ala Ala Ala Gly Gly 25 Asn Gln Lys Asn Ser Pro Asp Arg Val Lys Arg Pro Met Asn Ala Phe Met Val Trp Ser Arg Gly Gln Arg Arg Lys Met Ala Gln G/u Asn Pro Lys Met His Asn Ser Glu Ile Ser Lys Arg Leu Gly Ala Glu Trp Lys 70 Leu Leu Ser Glu Thr Glu Lys Arg Pro Phe Ile Asp Glu Ala Lys Arg Leu Arg Ala Leu His Met Lys Glu His Pro Asp Tyr Lys Tyr Arg Pro 100 105 Arg Arg Lys Thr Lys Thr Leu Met Lys Lys Asp Lys Tyr Thr Leu Pro 120 Gly Gly Leu Leu Ala Pro Gly Gly Asn Ser Met Ala Ser Gly Val Gly 135 Val Gly Ala Gly Leu Gly Ala Gly Val Asn Gln Arg Met Asp Ser Tyr 155 150

195 200 205 Ser Met Thr Ser Ser Gln Thr Tyr Met Asn Gly Ser Pro Thr Tyr Ser 210 220

 Met Ser Tyr Ser Gln Gly Gly Thr Pro Gly Met Ala Leu Gly Ser Met

 225
 230
 235
 240

 Gly Ser Val Val Lys Ser Glu Ala Ser Ser Ser Pro Pro Val Val Thr
 249
 250
 255

Ser Ser Ser His Ser Arg Ala Pro Cys Gln Ala Gly Asp Leu Arg Asp 260 265 270

Met Ile Ser Met Tyr Leu Pro Gly Ala Glu Val Pro Glu Pro Ala Ala 275 280 285

Pro Ser Arg deu His Met Ser Gln His Tyr Gln Ser Gly Pro Val Pro 290 Gly Thr Ala Ile Asn Gly Thr Leu Pro Leu Ser His Met

210> 20 <211> 443

/ <212> PRT <213> Homo sapiens

310

(1)

35

50

305

45

55

60

Ala Thr Leu Ala His Leu Leu Pro Ala Pro Ala Met Tyr Ser Leu Leu Glu Thr Glu Leu Lys Asn Pro Val Gly Thr Pro Thr Gln Ala Ala Gly 5 90 Thr Gly Gly Pro Ala Ala Pro Gly Gly Ala Gly Lys Ser Ser Ala Asn 105 Ala Ala Gly Gly Ala Asn Ser Gly Gly Gly Ser Ser Gly Gly Ala Ser 120 10 Gly Gly Gly Gly Thr Asp Gln Asp Arg Val Lys Arg Pro Met Asn 135 Ala Phe Met Val Trp Ser Arg Gly Gln Arg Arg Lys Met Ala Leu Glu 150 155 Asn Pro Lys Met His Asn Ser Glu Ile Ser Lys Arg Leu Gly Ala Asp 15 165 170 Trp Lys Leu Leu Thr Asp Ala Glu Lys Arg Pro Phe Ile Asp Glu Ala 185 Lys Arg Leu Arg Ala Val His Met Lys Glu Tyr Pro Asp Tyr Lys Tyr 200 20 Arg Pro Arg Arg Lys Thr Lys Thr Leu Leu Lys Lys Asp Lys Tyr Ser 215 Leu Pro Ser Gly Leu Leu Pro Pro Gly Ala Ala Ala Ala Ala Ala Ala 230 235 Ala Ala Ala Ala Ala Ala Ala Ser Ser Pro Val Gly Val Gly Gln 25 245 250 Arg Leu Asp Thr Tyr Thr His Val Asn Gly Trp Ala Asn Gly Ala Tyr 260 265 Ser Leu Val Gln Glu Gln Leu Gly Tyr Ala Gln Pro Pro Ser Met Ser 280 30 Ser Pro Pro Pro Pro Pro Ala Leu His Arg Tyr Asp Met Ala Gly Leu 295 Gln Tyr Ser Pro Met Met Pro Pro Gly Ala Gln Ser Tyr Met Asn Val 310 315 Ala Ala Ala Ala Ala Ala Ser Gly Tyr Gly Gly Met Ala Pro Ser 35 330 325 Ala Thr Ala Ala Ala Ala Ala Tyr Gly Gln Gln Pro Ala Thr Ala 345 340 Ala Ala Ala Ala Ala Ala Ala Ala Met Ser Leu Gly Pro Met Gly 360 40 Ser Val Val Lys Ser Glu Pro Ser Ser Pro Pro Pro Ala Ile Ala Ser 375 His Ser Gln Arg Ala Cys Leu Gly Asp Leu Arg Asp Met Ile Ser Met 395 Tyr Leu Pro Pro Gly Gly Asp Ala Ala Asp Ala Ala Ser Pro Leu Pro 45 410 Gly Gly Arg Leu His Gly Val His Gln His Tyr Gln Gly Ala Gly Thr 425 Ala Val Asn Gly Thr Val Pro Leu Thr His Ile 50 <210> 21 <211> 276 <212> PRT

<213> Homo sapiens

<400> 21

Met Ser Lys Pro Val Asp His Val Lys Arg Pro Met Asn Ala Phe Met 1 5 10 15 15 Val Trp Ser Arg Ala Gln Arg Arg Lys Met Ala Gln Glu Asn Pro Lys 20 30 30 30 Met His Asn Ser Glu Ile Ser Lys Arg Leu Gly Ala Glu Trp Lys Leu 35 40 45 Leu Thr Glu Ser Glu Lys Arg Leu Asp Glu Ala Lys Arg Leu

Arg Ala Met His Met Lys Glu His Pro Asp Tyr Lys Tyr Arg Pro Arg Arg Lys Pro Lys Thr Leu Leu Lys Lys Asp Lys Phe Ala Phe Pro Val Pro Tyr Gly Leu Gly Gly Val Ala Asp Ala Glu His Pro Ala Leu Lys Ala Gly Ala Gly Leu His Ala Gly Ala Gly Gly Gly Leu Val Pro Glu Ser Leu Leu Ala Asn Pro Glu Lys Ala Arg Val Phe Phe Pro Gln Ser Ala Gly Ser Pro Tyr Ser Leu Leu Asp Leu Gly Ser Lys Met Ala Glu Ile Ser Ser Ser Ser Ser Gly Leu Pro Tyr Ala Ser Ser Leu Gly Tyr Pro Thr Ala Gly Ala Gly Ala Phe His Gly Ala Ser His Pro Ser Pro Gly Asn Pro Gly Tyr Met Ile Pro Cys Asn Cys Ser Ala Trp Pro Ser Pro Gly Leu Gln Pro Pro Leu Ala Tyr Ile Leu Leu Pro Gly Met Gly Lys Pro Gln Leu Asp Pro Tyr Pro Ala Ala Tyr Ala Ala Ala Leu <210> 22 <211> 533 <212> PRT <213> Homo sapiens <400> 22 Met Leu Leu Asp Ala Gly Pro Gln Phe Pro Ala Ile Gly Val Gly Ser 1 0 Phe Ala Arg His His His Ser Ala Ala Ala Ala Ala Ala Ala Ala Ala Glu Met Gln Asp Arg Glu Leu Ser Leu Ala Ala Ala Gln Asn Gly Phe Val Asp Ser Ala Ala Ala His Met Gly Ala Phe Lys Leu Asn Pro Gly Ala His Glu Leu Ser Pro Gly Gln Ser Ser Ala Phe Thr Ser Gln Gly Pro Gly Ala Tyr Pro Gly Ser Ala Ala Ala Ala Ala Ala Ala Ala 8.5 Ala Leu Gly Pro His Ala Ala His Val Gly Ser Tyr Ser Gly Pro Pro

Phe Asn Ser Thr Arg Asp Phe Leu Phe Arg Ser Ala Arg Leu Pro Gly Thr Ser Ala Pro Gly Gly Gly Gln His Gly Leu Phe Gly Pro Gly Ala Gly Gly Leu His His Ala His Ser Asp Ala Gln Gly His Leu Leu Phe Pro Gly Leu Pro Glu Gln His Gly Pro His Gly Ser Gln Asn Val Leu Asn Gly Gln Met Arg Leu Gly Leu Pro Gly Glu Val Phe Gly Arg Ser Glu Gln Tyr Arg Gln Val Ala Ser Pro Arg Thr Asp Pro Tyr Ser Ala Ala Gln Leu His Asn Gln Tyr Gly Pro Met Asn Met Asn Met Gly Met

		210					215					220				
	Asn 225	Met	Ala	Ala	Ala	Ala 230	Ala	His	His	His	His 235	His	His	His	His	His 240
5	Pro	Gly	Ala	Phe	Phe 245	Arg	Tyr	Met	Arg	Gln 250	Gln	Cys	Ile	Lys	Gln 255	Glu
			Cys	260					265					270		
		-	Asn 275	-				280					285			
10		290	Glu				295					300				
	305		Glu	-		310					315					320
15			Asn		325					330					335	
			Pro	340					345					350		
			Lys 355					360					365			
20		370	Cys				375					380				
	385		Val			390					395					400
25	-		Tyr		405					410					415	
			Ser	420					425					430		
	_		Ser 435					440					445			
30		450	Ser				455					460				
	465					470					475					Gly 480
35		_	Ser		485					490					495	
	_			500					505					510		Gly
	Gly	Gly	Ser 515		Thr	Ala	Gly	Gly 520	His	Ser	Gly	Leu	Ser 525	Ser	Asn	Phe
40	Asn	Glu 530	Trp	Tyr	Val											

The little of the first of the